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ABSTRACT

This paper discusses issues which make it difficult to measure the teaching performance of college faculty. The issues discussed are those which could lead to ethical and legal problems should they be ignored--those issues which are sensitive because personnel decisions are made on the basis of evaluations. Simplistic methods, such as student ratings, are reliable enough for teaching refinement, but have neither the reliability nor validity for making personnel decisions. A method is described which offers resources to help instructors refine their teaching. The author recommends integrating curriculum development and evaluation so that evaluation is tied to curricular goals, and not left to just student opinions. A Checklist for Comprehensive Assessment of Instructional Scholarship is appended to allow for making personnel decisions on the basis of multiple sources of evidence. (Author/PN)

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Issues Confounding the Measurement of Teaching At CSUS

by Eli Cohen

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This paper discusses some of the issues which make it difficult to measure the teaching performance of college faculty. There are methodological issues of concern in measuring change (1), which themselves are great, but will not be mentioned here. What will be discussed are those issues which could lead to ethical and legal problems should they be ignored, those issues which are sensitive because personnel decisions are made on the basis of evaluations.

ISSUE: STUDENTS DO NOT AGREE

A simplistic approach to measuring teaching performance is having students respond to a common questionnaire. At the end of each semester, students typically are polled for their opinions.

My research (2), as well as common experience, demonstrates that students do not agree with one another. Behavioral scientists who are familiar with the analysis of variance would say that any given student's opinion is composed of a variety of factors including teacher's effect, class effect, course effect, response style of this student, random error, plus the confounding factor of the interaction between each student's perceived need and the

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conduct of the course as a whole.

Some students rate demanding courses high, others low. Hence, student perspective (which varies with each student) is a factor in the ratings. Profile analysis can be used to uncover differing student response profiles within a heterogeneous student population. But typically this important information is ignored, and interpretations are made on the basis of averages only.

When classes are composed of students with differing expectations, no one teaching style is best for all. This is clear by noting that those skills which makes a good inner city high school teaching (discipline, motivation) are different from those which make a good preparatory school teacher (command of advanced topics). A good teacher teaches to the student audience. When the students are heterogenous, there is no one right way to teach (3).

ISSUE: STUDENTS' VIEW OF INSTRUCTION IS LIMITED

Research shows a low correlation between students' opinions on teaching and measures of their learning (4). If we believe that learning is the most important measure of instruction, then students' opinions are a poor proxy measure.

Also, as the Dr. Fox studies (in which an actor gave lectures with little content) show, students opinion ratings are greatly influenced by showmanship (5).

Students have no basis for judging some important

factors, such as instructors knowledgability. In fact, teaching assistants often are rated higher on this dimension than are their professors.

Factors such as accessibility of instructor outside of class cannot be measured from a student who never sought outside help, yet this student's responses are averaged in.

Lastly, students are not fully equipped to measure the quality of instruction. Part of curriculum development involved selecting what level of understanding (for example, using Bloom's taxonomy) is demanded (6). In this sense, instructors who demand a lot of thinking are at a disadvantage because they are considered hard by the less intelligent student.

ISSUE: THE PURPOSE OF EVALUATIONNN

For college faculty, there are at least two functions of evaluation: for teaching refinement and for judgemental purposes (7). These functions are mirrored in two approaches to evaluation: formative and summative (8).

In evaluation for teaching refinement, it is assumed that

- * instructors want to improve at their craft,
- * improvement is a process,
- * improvement is attainable.

Part of this teaching development is a recognition that teaching is more than lecturing. Research has shown that the methods of instruction, including the setting and

the environment, are even more important for learning than are instructor characteristics (9).

In contrast, in evaluation for judgemental purposes, it is assumed that

- * teaching quality is a fixed asset, and

- * teaching quality is quantifiable using student opinions.

ONE SOLUTION: EVALUATION FOR TEACHING REFINEMENT:

STRUCTURED FEEDBACK

I developed the following methodology to help teachers evaluate (for teaching refinement) their own teaching (10).

It assumes that while counts of students responses to questionnaires are of limited use, student comments can be quite useful. Recognizing that students do not all agree, ideally student comments should be presented in a structured format, so that the instructor can determine how the class as a whole feels about each point.

With this in mind, I first undertook to examine what are the dimensions on which college teaching differs. Many researchers have factor analyzed sets of results from teaching questionnaires in search of what dimensions differentiate good from bad teaching. Rather than run my own factor analysis, I looked to this literature to uncover what dimensions others had found.

There were some 25 such studies, each of which found some sets of dimensions. I discarded from consideration dimensions which were found on only one study. Doing so, I

found 23 dimensions which were discovered on more than one analytical study.

Then a panel of experts categorized items into these dimension. An item is a statement describing teaching, such as "My instructor encourages questions from the class". This process yielded a menu of items, grouped into dimensions which had be shown to measure teaching (11).

An instructor can tailor a questionnaire to his/her class by selecting one or more item from each dimension. A questionnaire so produced is guaranteed to be complete and not one-sided, since it takes the 23 dimensions discovered by the earlier study.

Using the methodology I recommend, such a questionnaire is administered to one's class in the following way. First, each student responds to each item by expressing his/her level of agreement on a Likert scale.

This is typical of most evaluation instructions in higher education.

But in addition, each student then selects items on which he/she rated the course at either extreme. The student notes the number of that eliciting item, and then comments on why that item was rated at an extreme. For those items rated low, the student reponds with suggestions for improvement, and for those items rated high, the student specifies what was right and good.

The results from the whole class are summarized for the instructor item by item. For each item the instructor

sees how many rate the course with a one, two, three, four, or five (corresponding to level of agreement to the item.) Also all positive and negative comments are summarized.

Feedback has been shown to improve instruction (12). This structured feedback approach has been well received. It tends to be non-threatening and yet yields concrete ideas for teaching refinement. The report is balanced and interpretable.

ONE SOLUTION: PORTFOLIO OF EVIDENCE

For the reasons shown above, relying on student rating for personnel decisions is untenable. A method which is generally acceptable as suitable for evaluating teaching is the portfolio method in which a variety of teaching measures are actively solicited by the evaluation committee of the faculty candidate.

Such measures include, but are not limited to the following: (13)

- * student satisfaction
- * innovations in teaching
- * willingness to improve teaching
- * improvement over time
- * actual materials developed such as syllabi
- * evidence of student learning
- * collegial input and comparisons
- * evidence of worth

This last point refers to the difference between merit and worth. Worth refers to the ability to teach courses in high demand and is closely tied to market conditions (14).

It is be clear that the university benefits in having quality faculty. In the same way that the university supports its concern for security by providing police officers, the university should support its concern for good teaching by providing a teaching refinement professional. This professional is given the task to aid faculty in the refinement of their teaching.

A RECOMMENDATION FOR INTEGRATING EVALUATION INTO THE TEACHING OF COURSES:

No one would dispute that planning contributes positively to the success of a course. Ideally in planning a course, each instructor would start with the goals of the course and from there develop activities in support of those goals (15). For many classes, the course goals are part of the larger curricular goals, and so would involve efforts of several of the faculty. In any case, from the goals are derived supporting activities to reach the goals.

What I recommend is that instructors be encouraged to go one step further and determine how they will evaluate the success of the supporting activities. That is, instructors will be asked to plan their courses in terms of curricular goals. They will develop activities and ways to evaluate those activities which support the course goals,

as is shown in this figure:

GOALS - ACTIVITIES - EVIDENCE OF MERIT

This methodology is similar to that of Rockart's critical incidents (16). Rockart was interested in what information managers need to manage their business. We are interested in what information faculty need to manage their classes.

Some of the goals which an individual faculty member and department might set for a course include the following:

- * increase student knowledge
- * increase student skills
- * improve student attitudes
- * increase student problem solving skills
- * eliminate marginal students

By following the above methodology, these results occur:

- * because the goals of the course are public, instruction improves.
- * because courses are well planned, instruction improves.
- * evaluation, since it built in, takes place.
- * evaluation leads to improvement on those areas which need improvement.
- * evaluation is based to what is important, the goals of the course.

SUMMARY

Faculty teaching can be evaluated, but not by simplistic methods. Student ratings are reliable enough for teaching refinement, but have neither the reliability nor validity for making personnel decisions.

Given the above, we should offer teaching resources to help instructors refine their teaching. One method was described.

Personnel decisions should be made only on the basis of multiple sources of evidence. Also, I recommend integrating curriculum development and evaluation so that evaluation is tied to curricular goals, and not left to just student opinions.

NOTES

(1) The problems of measuring change and drawing meaningful inference are full known in the behavioral sciences. See, for example, Epstein, I. and T. Tripodi. Research techniques for program planning, monitoring, and evaluation. Columbia University Press, 1977.

(2) Cohen, E. "Prompted feedback: a novel approach to course and instructor evaluation." Resources in Education (10), 1980.

(3) See Spaulding, R.L. Adapting teaching styles to learning styles. Proceedings of the American Educational Research Association Annual Meeting, Toronto, March 30, 1978.

(4) Cohen, S.A. and W.G. Berger. Dimensions of students' ratings of college instructors underlying subsequent achievement on course examinations. Proceedings of the 178th Annual Convention of the American Psychological Association, 1970, 5, 605-606.

(5)

(6) Bloom, B.S. (ed). Taxonomy of educational objectives:

the classification of educational goals. Handbook 1.
Cognitive domain. New York: McKay, 1956, pp. 201-207.

(7) Other purposes include evaluation for research and
evaluation for student course selection.

(8) For more on evaluating for these two purposes, see
Bloom, B.S., Hastings, J.T., and G.F. Madaus. Handbook on
formative and summative evaluation of student learning. New
York: McGraw-Hill Book Co., 1971.

(9) Grasha, A. Observations on relating teaching goals to
student response style and classroom methods. *American
Psychologist*, 1972, 27, 144-147.

(10) See (2). Also I gratefully acknowledge the work of
Edward Vockell in a related technique.

(11) These items and their dimensions are shown in
Appendix A, which is from Cohen, E. *Student Feedback*,
University of California (undated).

(12) See (2). Also, this was the well agreed upon as a
consistent research result at the American Educational
Research Association Training Presession, Evaluation in
Higher Education, April 7-8, 1979.

(13) A more complete listing is given in Appendix B.

(14) Interestingly, Michael Scriven, who advocates this distinction, helped draft the 1973 Master Plan for Higher Education of California.

(15) The works of Mager on how to develop objectives are instructive.

(16) Rockart, J.F. Chief executives define their own data needs. Harvard Business Review, March - April, 1979.

INSTRUCTOR ITEMS	INSTRUCTOR ITEMS	INSTRUCTOR ITEMS	INSTRUCTOR ITEMS	INSI
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CLARITY

- 1 My instructor is able to simplify difficult material.
- 2 My instructor explains difficult material clearly.
- 3 My instructor explains clearly.

QUESTIONING OF STUDENTS

- 5 My instructor asks questions skillfully.
- 6 My instructor always listens when I answer a question.
- 7 My instructor develops classroom discussion.

QUESTIONING BY STUDENTS

- 9 My instructor encourages questioning from students.
- 10 My instructor is careful and precise when answering questions.

ORGANIZATION - PLANNING

- 12 My instructor gives presentations that are easy to outline.
- 13 My instructor states objectives for each class session.
- 14 My instructor identifies what s/he considers important.
- 15 My instructor stresses important points.

RECEPTIVENESS

- 17 My instructor is receptive to student criticism.
- 18 My instructor has interest and concern in the quality of his/her teaching.

INTEREST

- 20 My instructor seems to have a genuine interest in the subject.
- 21 My instructor seems to enjoy teaching.

INSTRUCTIONAL SKILLS

- 23 My instructor gives references for more interesting points.
- 24 My instructor has an effective style of presentation
- 25 My instructor makes good use of examples and illustrations.

TEACHING STYLE

- 27 My instructor discusses points of view other than his/her own.
- 28 My instructor contrasts implications of various theories.
- 29 My instructor discusses recent developments in the field.
- 30 My instructor presents origins of ideas and concepts.
- 31 My instructor presents facts and concepts from related fields.
- 32 My instructor emphasizes conceptual understanding of material.

PREPARATION

34 My instructor seems well-prepared for class.

ENTHUSIASM - DYNAMISM

- 36 My instructor displays enthusiasm when teaching.
- 37 My instructor is a dynamic and energetic person.
- 38 My instructor has an interesting style of presentation.
- 39 My instructor stimulates interest in the course.
- 40 My instructor stimulated my thinking.

HELPFULNESS

- 42 My instructor is actively helpful when students have problems.
- 43 My instructor has a genuine interest in students.
- 44 My instructor relates to students as individuals.
- 45 My instructor respects students as persons.
- 46 My instructor is sensitive to students' attitudes.
- 47 My instructor is readily available for consultation.
- 48 My instructor is accessible to students out of class.

EFFECTIVENESS

50 My instructor motivates me to do my best work.

PERSONALITY

- 54 My instructor is neat in appearance and work.
- 55 My instructor has a sense of humor.
- 56 My instructor is alert.
- 57 My instructor is broadminded.
- 58 My instructor has a pleasing personality.

RESPONSIVENESS

- 60 My instructor returns papers quickly enough for me to benefit.
- 61 My instructor recognizes when some students fail to comprehend.
- 62 My instructor knows whether the class is understanding him/her or not.
- 63 My instructor knows when students are bored or confused.

OVERALL

- 65 My instructor is a good teacher, overall.
- 66 My instructor is among the better teachers I have known.
- 67 My instructor makes learning easy and/or interesting.
- 68 My instructor has stimulated my thinking.
- 69 I would enjoy taking another course from my instructor.

ASSIGNMENTS AND READINGS

- 71 Course assignments are interesting and stimulating.
- 72 I am generally pleased with the text(s) required for this course.
- 73 The assigned readings significantly contribute to this course.
- 74 The assignments are of definite instructional value.
- 75 Handouts are valuable supplements to this course.

RELEVANCE AND USEFULNESS OF CONTENT TO NEEDS

- 76 The content of this course is relevant to my needs.
- 77 The course content is consistent with my prior expectations.
- 78 I can apply the information or skills learned in this course.
- 79 This course material is pertinent to my professional training.

INITIAL STUDENT INTEREST

- 81 Before taking this course, I was interested in the subject matter.

WORKLOAD

- 86 The amount of work expected for this course is reasonable.

TIME FOR QUESTIONS

- 83 There is sufficient time in class for questions and discussion.
- 84 I feel free to ask questions in class.

DEPTH/BREADTH

- 88 The course covers topics in reasonable depth.
- 89 The course covers a reasonable number of topics.

USE OF MEDIA - GUEST SPEAKERS

- 91 The televised portions of class are a great help to learning.
- 92 This course makes excellent use of audiovisuals.
- 93 The audiovisual materials help increase my understanding.
- 94 The guest speakers contribute significantly to this course.
- 95 This course uses media (text, films, etc.) wisely.
- 96 The audiovisual materials help to clarify difficult concepts.

EXAMS AND GRADES

- 98 Grades are assigned fairly and impartially.
- 99 Exams are reasonable in length and difficulty.
- 100 Exams accurately assess what I have learned in this course.
- 101 Exams are used to help me find my strengths and weaknesses.
- 102 Exams in this course have instructional value.

IMPACT ON STUDENTS

104 I learn a great deal in this course.

105 I feel I have matured as the result of taking this course.

106 I feel confident about my mastery of the material presented in this course.

107 My perspective of the world has been enlarged as the result of this course.

108 I have developed a greater appreciation of the course topic.

109 I enjoy learning in this course.

OVERALL

201 Overall this course is among the better I have taken.

202 This is a good course.

203 I highly recommend this course.

204 I understand what is expected of me in this course.

INSTRUCTOR SUPPLIED

206 Instructor supplied.

207 Instructor supplied.

208 Instructor supplied.

General

- | | |
|--|---|
| <p>111 The stated goals of this course are consistently pursued.</p> <p>112 The format of this course is appropriate to course purpose.</p> <p>113 Teaching methods used in this course are well chosen.</p> <p>114 This course includes a sufficient number of practical exercises.</p> | <p>115 I have sufficient time to complete the tests.</p> <p>116 This course includes a sufficient number of practical examples.</p> <p>117 Difficult topics are structured in easily understood ways.</p> <p>118 This course is well organized.</p> |
|--|---|

Lecture

- | | |
|---|--|
| <p>120 Lecture information is highly relevant to course objectives.</p> | <p>121 Class lectures contain information not covered in the textbook.</p> |
|---|--|

Self-Paced

Instructor

Course

- | | |
|--|--|
| <p>123 My instructor adjusts the pace to fit individual abilities and interests.</p> <p>124 The tutors/TA's facilitate my learning.</p> <p>125 The instructor facilitates my learning.</p> | <p>127 The components of this course are well integrated.</p> <p>128 The instructional units facilitate my learning.</p> <p>129 The format of this course helps me learn the course material.</p> <p>130 The quizzes help me learn the material.</p> <p>131 The syllabus for this course is excellent.</p> |
|--|--|

Team Teaching

Course

Instructor

- | | |
|--|---|
| <p>133 The lectures in this course are well integrated.</p> <p>134 Team teaching provides insights a single instructor could not.</p> <p>135 There is a minimum of repetition in this course.</p> <p>136 I prefer team teaching, as in this course, over single instructor courses.</p> <p>137 Team teaching is effectively used in this course.</p> <p>138 Having more than one instructor is advantageous.</p> | <p>140 Instruction is well-coordinated among team teachers.</p> <p>141 The guest lecturers are well-selected.</p> <p>142 The lecturers work well as a team.</p> |
|--|---|

Laboratory

- | | |
|---|---|
| 144 Lab procedures are clearly explained to me. | 150 The lab sessions are well organized. |
| 145 My lab assignments are promptly returned to me. | 151 Assistance is always available throughout the lab sessions. |
| 146 The lab helps me relate course information to potential job situations. | 153 The facilities for this course are excellent. |
| 147 The lab has adequate facilities. | 154 The lab-practice room is well equipped. |
| 148 Lab assignments are reasonable in length and complexity. | 155 I had sufficient opportunity to use lab/practice room facilities. |
| 149 The content of the lab is a worthwhile part of this course. | 156 The lab complements the lecture. |
| | 157 The lab instructor provided useful comments on my lab reports. |

FIELD TRIPS

- 160 The field trips in this course help me to learn.
- 161 The field trip(s) help me to better appreciate the course content.
- 162 I gain practical understanding of the subject through field trips(s).
- 163 The field trip(s) are an important part of this course.

DISCUSSION SECTIONS

- | | |
|--|--|
| 165 My discussion leader comes well prepared for the discussion. | |
| 166 My discussion leader is supportive of differing points of view. | |
| 167 My discussion leader provides helpful criticism. | |
| 168 My discussion leader is effective in bringing out student participation. | 169 My discussion leader is warm and open. |
| | 170 My discussion leader keeps the discussion lively. |
| | 171 My discussion leader makes clear what is expected of me. |
| | 172 Discussion helps me appreciate course topics. |

Appendix B

Checklist for Comprehensive Assessment of Instructional Scholarship

INSTRUCTOR: _____ COURSE: _____

DATE: _____

I. TEACHING MATERIALS PREPARED BY INSTRUCTOR

A. Materials Considered (Check all appropriate)

Goals _____	Syllabus _____	Audiotapes _____
Objectives _____	Study Guide _____	Examinations _____
Topic Outline _____	Lab Manual _____	Transparencies _____
Lecture Notes _____	Slides _____	Demonstrations _____
Films _____	Tape/slides _____	Bibliographies _____
Videotapes _____	Textbooks(s) _____	
Other (What?) _____		

B. To What Extent Do These Materials Demonstrate the Instructor's:

	(circle one)				
	High				Low
1. Command of the subject	1	2	3	4	5
2. Ability to organize material	1	2	3	4	5
3. Ability to present subject with force and logic	1	2	3	4	5
4. Capacity to illustrate relationship of subject to other fields	1	2	3	4	5
5. Spirit and enthusiasm for teaching	1	2	3	4	5
6. Effort to arouse curiosity in beginning students	1	2	3	4	5
7. Effort to stimulate advanced students to creative work	1	2	3	4	5
8. Grasp of objectives	1	2	3	4	5

- C. If an introductory or team taught course, indicate to what extent the instructor contributed to the development of these materials.

II. TEACHING MATERIALS SELECTED BY INSTRUCTOR (but prepared by others)

A. Materials examined (check)

Textbook	_____	Study Guide	_____	Reading Assign.	_____
Syllabus	_____	Videotapes	_____	Problem Assign.	_____
Films	_____	Audiotapes	_____	Bibliographies	_____
Slides	_____	Tape/slides	_____	Transparencies	_____
Lab Manual	_____	Paper Assign.	_____	Demonstrations	_____
Other (What?)	_____			Examinations	_____

B. To What Extend Do These Materials Demonstrate the Instructor's:

	(circle one)				
	High				Low
1. Command of the subject	1	2	3	4	5
2. Ability to organize material	1	2	3	4	5
3. Capacity to illustrate relationship of subject to other field	1	2	3	4	5
4. Spirit and enthusiasm for teaching	1	2	3	4	5
5. Effort to arouse curiosity in beginning students	1	2	3	4	5
6. Effort to stimulate advanced students to creative work	1	2	3	4	5
7. Grasp of objectives	1	2	3	4	5

- C. If any of these selections or assignments have been adapted from previous instructors or if this is an introductory or team-taught course, indicate the extent to which the instructor contributed to the selection of these materials.

III. PUBLISHED WORKS ABOUT AND SIGNIFICANT INNOVATIONS IN TEACHING

A. List Published Works

B. Describe Significant Innovations

C. To What Extent Do These Works/Innovations Illustrate the Instructor's:

	(circle one)				
	High			Low	
1. Concern for improving teaching	1	2	3	4	5
2. Command of knowledge about teaching/ learning in the field	1	2	3	4	5
3. Spirit and enthusiasm for teaching	1	2	3	4	5
4. Growth in the field	1	2	3	4	5

IV. DIRECT OBSERVATIONS (check all appropriate)

A. Materials Examined

Student Evaluations _____ Videotapes _____
Faculty Evaluations _____ Faculty/Student Notes _____
Dept. Chair Evaluation _____ Other (What?) _____

B. To What Extent Do These Materials Demonstrate the Instructor's:

	(circle one)				
	High			Low	
1. Ability to organize materials	1	2	3	4	5
2. Ability to present subject with force and logic	1	2	3	4	5
3. Capacity to illustrate relationship of subject to other fields	1	2	3	4	5

B. (Con't)

(circle one)
High Low

4. Spirit and enthusiasm for teaching

1 2 3 4 5

5. Personal attributes as they enhance
the teaching process

1 2 3 4 5

V. STUDENT LEARNING

A. Pre-test/Post-test Gains (include tests)

1. Mean _____

2. Range _____

B. Tracking Information (elaborate)

C. Scores on Standardized Tests

1. Test Name: _____

Mean Score: _____

Variance: _____

2. Test Name: _____

Mean Score: _____

Variance: _____

D. Other (Describe)

Mean FPQ Factor Values for College
Academic Disciplines - 7 point scale

from Scott, C.S., G. L. Thorne, and J.H. Beaird, Factors
influencing professorial assessment, paper delivered at the
Annual Meeting of the American Educational Research
Association, New York, New York, April 1977.

Factor Label	Overall Factor Mean (N=138)	Overall Standard Deviation	Disciplines			
			Arts/ Humanities (N=19)	Physical Sciences (N=43)	Social Sciences (N=22)	Prof. Schools (N=54)
1 Publications	2.6	1.88	3.2	2.9	2.8	2.2
2 Student Ratings	4.0	2.15	4.3	3.8	4.8	3.8
3 Service on Departmental Committees	3.2	1.88	3.9	3.1	2.8	3.3
4 Support of Department Policy and Goals	2.7	2.33	2.9	2.0	2.0	3.4
5 Colleague Assessments of Syllabi	.6	1.40	1.2	.1	.6	.8
6 Informal Colleague Appraisals/Teaching	3.5	2.17	3.2	3.4	4.1	3.6
7 Formal Colleague Appraisals/Teaching	.4	1.24	.7	.5	.5	.3
8 Grant Support for Research	1.8	2.26	.9	2.6	1.0	2.0
9 Supervision of Theses	.2	.68	.1	.1	.1	.4
10 Personality Traits and Attitudes	4.1	2.14	3.8	3.2	4.0	5.0
11 Consultation Record on/off Campus	1.3	1.84	.6	.8	1.3	1.9
12 Service on Institution/System Committees	2.8	1.92	3.0	2.9	2.5	2.9
13 Academic Advising	2.2	2.06	1.2	1.7	2.6	2.9
14 Membership in Professional Organizations	2.0	1.93	2.1	2.3	.9	2.3
15 Service (no fee) to Community	2.1	1.89	1.7	1.9	2.2	2.4
16 Supervision of Field Placements	1.1	1.79	.6	.6	1.2	1.7
17 Elected Offices in Organizations	2.3	2.02	2.6	2.6	1.3	2.4
18 Public Presentations of Products	2.5	2.18	2.8	3.1	2.0	2.2
19 Informal Colleague Appraisals/Research	1.8	2.15	2.4	1.6	1.0	2.1
20 Formal Colleague Appraisals/Research	.2	.99	.9	.1	.3	.2
21 Obtaining Advance Degree	5.2	2.32	4.6	5.4	4.4	5.7
22 Evaluation by Department Chairman	5.0	2.42	4.6	5.3	3.7	5.4
23 Informal Colleague Appraisals/Service	1.9	2.13	1.2	1.7	1.6	2.3
24 Formal Colleague Appraisals/Service	.2	.81	.6	.1	0.0	.1
25 Evidence of Student Learning in Courses	1.4	2.22	1.6	.9	.7	2.1
26 Election to Faculty Senate	1.0	1.61	.9	1.1	.4	1.2
27 Effort to Remain Current in Discipline	2.4	2.45	1.8	2.7	2.0	2.8
28 Credit Hour Production	1.4	2.19	1.3	.3	1.4	2.3
29 Student Demand for Course	1.2	1.90	1.7	.6	1.7	1.3
30 Time in Academic Rank	4.8	2.28	3.3	4.8	4.9	5.3
31 Evaluation by School/Department Committee	3.2	2.85	4.4	3.3	2.8	3.0
32 Availability to Students	2.4	2.26	1.1	2.4	2.4	3.1
33 Innovative Effort in Teaching	2.0	2.33	2.2	3.2	3.2	2.6
34 Formal Peer Appraisals (from off campus)	.2	1.02	.2	.1	.7	.2

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Current and Preferred Sources of Information for Evaluating Teaching Performance

	Percentage Indicating Extremely Critical Factor and Not a Factor															
	Current Use and Importance								Importance Each Should Have							
	Professional Fields N=116		Social Sciences N=102		Humanities N=104		Natural Sciences N=131		Professional Fields N=116		Social Sciences N=102		Humanities N=104		Natural Sciences N=131	
	Ext. Crit.	Not a Fact.	Ext. Crit.	Not a Fact.	Ext. Crit.	Not a Fact.	Ext. Crit.	Not a Fact.	Ext. Crit.	Not a Fact.	Ext. Crit.	Not a Fact.	Ext. Crit.	Not a Fact.	Ext. Crit.	Not a Fact.
Systematic student ratings	15	5	21	11	24	7	21	9	16	1	20	8	23	3	15	4
Informal student opinions	1	6	4	7	1	8	2	5	1	9	1	14	1	10	3	14
Colleague ratings based on classroom visits	2	50	4	54	9	47	5	34	9	19	10	39	11	22	8	19
Colleague opinions	12	9	10	8	17	6	8	3	9	4	5	11	13	7	7	7
Student examination performance	4	31	4	38	4	22	2	32	2	38	1	38	5	31	2	32
Content of course syllabi and examination	2	38	1	38	5	31	2	32	6	8	2	15	11	13	5	14
Chairman evaluation	23	5	16	10	24	8	17	5	25	2	13	10	24	7	14	5
Dean evaluation	22	12	10	28	13	27	7	24	15	11	3	30	9	25	4	26
Committee evaluation	22	20	24	25	27	18	24	16	18	12	21	19	24	13	22	11
Self-evaluation or report	3	37	1	45	4	40	3	35	6	19	2	38	6	21	5	27
Long-term follow-up of students' performance	2	59	1	61	6	51	2	47	6	23	5	38	10	20	7	20
Alumni opinions or ratings	1	48	1	57	0	57	0	45	3	34	0	38	4	32	2	31
Popularity of elective courses (e.g., enrollment)	1	43	2	25	1	23	1	40	0	34	1	25	0	27	0	38
Videotape of classroom teaching	0	62	0	64	1	71	1	61	4	47	2	50	1	51	2	56
Teaching improvement activities (participation in workshops, in-service programs, etc.)	0	29	1	49	4	48	1	45	5	14	1	31	4	22	1	27

from Educational Testing Service. How universities evaluate faculty performance: a survey of department heads. GREB No. 75-5bR, Princeton, 1977.